

Metropolitan Transportation Commission

SAN FRANCISCO PUBLIC LIBRARY



3 1223 11167 9354

**bart
impact
program**

Land Use and Urban Development Project

BART'S CONSUMPTION OF LAND AND PROPERTY

NOV 15 1978

DOCUMENTS DEPT.
S.F. PUBLIC LIBRARY



D
REF
388.42
B2813cL
1978

working paper



Digitized by the Internet Archive
in 2015

<https://archive.org/details/studyofbartscons1978metr>

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation and Department of Housing and Urban Development in the interest of information exchange.

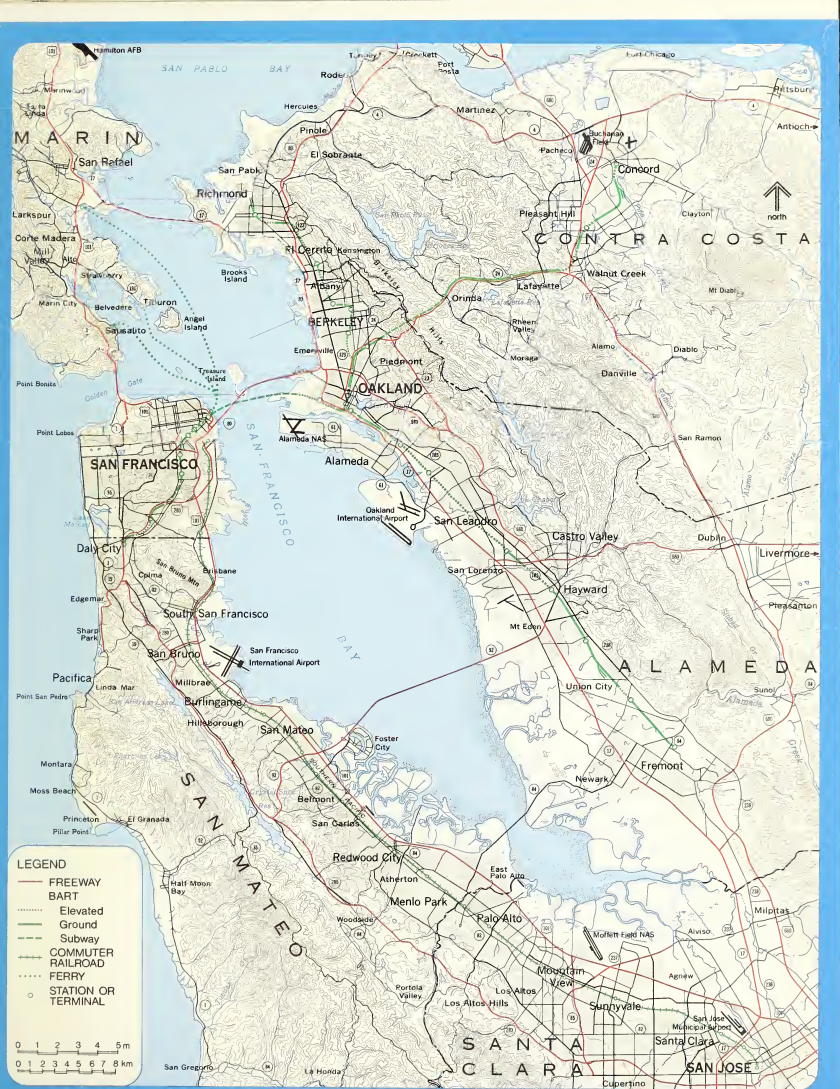
The United States Government and the Metropolitan Transportation Commission assume no liability for the contents or use of this document.

PREPARED BY JOHN BLAYNEY ASSOCIATES/DAVID M. DORNBUSCH & CO., INC.
A JOINT VENTURE

UNDER CONTRACT WITH THE METROPOLITAN TRANSPORTATION COMMISSION
FOR THE U.S. DEPARTMENT OF TRANSPORTATION
AND THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
UNDER CONTRACT DOT-OS-30176, TASK ORDER 205

MAY 1978

1. Report No. DOT-BIP-WP-55-5-78		2. Government Accession No.		3. Report's Catalog No.	
4. Title and Subtitle STUDY OF BART'S CONSUMPTION OF LAND AND PROPERTY				5. Report Date March 1978 Revised, May 1978	
				6. Performing Organization Code	
7. Author(s) Michael V. Dyett, Gilbert H. Castle, III				8. Performing Organization Report No. WP-55-5-78	
				10. Work Unit No. (TRAIS) Task Order 205	
9. Performing Organization Name and Address John Blayne Associates/David M. Dornbusch & Co., Inc. A Joint Venture 177 Post Street, Suite 750 San Francisco, California 94108				11. Contract or Grant No. DOT-OS-30176	
				13. Type of Report and Period Covered Working Paper	
12. Sponsoring Agency Name and Address U.S. Department of Transportation and U.S. Department of Housing and Urban Development Washington, D. C.				14. Sponsoring Agency Code	
15. Supplementary Notes The Metropolitan Transportation Commission is prime contractor for the BART Impact Program. John Blayne Associates/David M. Dornbusch & Co., Inc., A Joint Venture, is the subcontractor responsible for the Land Use and Urban Development Project.					
16. Abstract This working paper documents BART's consumption of land and property in terms of the characteristics of business and people displaced, describes the relocation process, and examines development on surplus land BART acquired and subsequently sold. Study methods included statistical analysis of parcel data obtained from the BART Real Estate Department and the California Department of Transportation, a small survey of households and firms receiving relocation payments from BART, and key informant interviews with persons knowledgeable about BART's real estate activities. The paper closes with and assessment of the policy implications of this study.					
17. Key Words San Francisco Bay Area Rapid Transit System (BART); Relocation of Households & Businesses BART Impact Program Land Use Impacts; Joint Development Rail Rapid Transit — Land Acquisition				18. Distribution Statement Document is available to the public through the National Technical Information Service, Springfield, Virginia 22151	
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 47	
				22. Price	



BART: The Bay Area Rapid Transit System

Length: The 71-mile system includes 20 miles of subway, 24 miles on elevated structures and 27 miles at ground level. The subway sections are in San Francisco, Berkeley, downtown Oakland, the Berkeley Hills Tunnel and the Transbay Tube.

Stations: The 34 stations include 13 elevated, 14 subway and 7 at ground level. They are spaced at an average distance of 2.1 miles: stations in the downtowns are less than one-half mile apart while those in suburban areas are two to four miles apart. Parking lots at 23 stations have a total of 20,200 spaces. There is a fee (25 cents) at only one of the parking lots. BART and local agencies provide bus service to all stations.

Trains: Trains are from 3 to 10 cars long. Each car is 70 feet long and has 72 seats. Top speed in normal operations is 70 mph with an average speed of 36 mph including station stops. All trains stop at all stations on the route.

Automation: Trains are automatically controlled by the central computer at BART headquarters. A train operator on board each train can override automatic controls in an emergency.

Magnetically encoded tickets with values up to \$20 are issued by vending machines. Automated fare gates at each station compute the appropriate fare and deduct it from the ticket value. At least one agent is present at each station to assist patrons.

Fares: Fares range from 25 cents to \$1.45, depending upon trip length. Discount fares are available to the physically handicapped, children 12 and under, and persons 65 and over.

Service: BART serves the counties of Alameda, Contra Costa and San Francisco, which have a combined population of 2.4 million. The system was opened in five stages, from September, 1972, to September, 1974. The last section to open was the Transbay Tube linking Oakland and the East Bay with San Francisco and the West Bay.

Routes are identified by the terminal stations: Daly City in the West Bay, Richmond, Concord and Fremont in the East Bay. Trains operate from 6:00 a.m. to midnight on weekdays, every 12 minutes during the daytime on three routes: Concord-Daly City, Fremont-Daly City, Richmond-Fremont. This results in 6-minute train frequencies in San Francisco, downtown Oakland and the Fremont line where routes converge. In the evening, trains are dispatched every 20 minutes on only the Richmond-Fremont and Concord-Daly City routes. Service is provided on Saturdays from 9 a.m. to midnight at 15-minute intervals. Future service will include a Richmond-Daly City route and Sunday service. Trains will operate every six minutes on all routes during the peak periods of travel.

Patronage: Approximately 142,000 one-way trips are made each day. Approximately 200,000 daily one-way trips are anticipated under full service conditions.

Cost: BART construction and equipment cost \$1.6 billion, financed primarily from local funds: \$942 million from bonds being repaid by the property and sales taxes in three counties, \$176 million from toll revenues of transbay bridges, \$315 million from federal grants and \$186 million from interest earnings and other sources.

March 1978

PREFACE

The BART Impact Program (BIP) is a comprehensive policy-oriented effort to identify, describe, measure, and present findings as accurately as possible about the multi-faceted impacts of a major public transportation investment — the BART system. The major objective of the Land Use and Urban Development Project is to determine how and to what extent BART has influenced the spatial arrangements of people and activities within the San Francisco Bay Area. To accomplish this task, the project will focus on the way BART has influenced (1) location decision processes; (2) actual movement behavior that results from those decisions and other market forces; and (3) the form, character, and functioning of aggregate spatial groupings that represent the net outcome of those decisions and movement patterns. Changes attributable to BART will be measured against pre-BART and no-BART alternatives. In all of these studies, BART's effects on individual socio-economic groups, particularly minorities and the disadvantaged, will receive careful attention.

The Land Use and Urban Development Project is one of six major projects comprising the BART Impact Program. The others are:

- Economics and Finance Project (E&F)
- Environment Project (Env)
- Institutions and Lifestyles Project (ILS)
- Public Policy Project (PP)
- Transportation System and Travel Behavior Project (TSTB)

Each of these projects is designed to investigate specific aspects of BART's impacts, to explain why the impacts occur, and to identify who is affected by the impacts and the distributional effects. The projects then will demonstrate how the information derived can be used by decision-makers to enhance the benefits and to reduce the dis-benefits of BART, and to increase understanding of the potential impacts of rail rapid transit investments in the Bay Area and other American metropolitan areas.

This working paper presents the analysis and findings of the study of BART's consumption of land and property — one aspect of BART's impacts on land use and urban development. The paper is presented for review by BART Impact Program staff, federal sponsors, and other interested planners and researchers.

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	1
1. INTRODUCTION	6
2. RESEARCH QUESTIONS AND STUDY DESIGN	7
Objectives	7
Methodology	7
Limitations	10
3. PROPERTY ACQUIRED FOR BART FACILITIES	12
Overview	12
Residential and Business Displacement	14
Relocation of Households and Firms	20
4. SURPLUS PROPERTIES	24
BART's Real Estate Policies	24
Disposition of Surplus Land	24
5. CONCLUSIONS AND IMPLICATIONS	29
PARTICIPATING FIRMS	31
APPENDIX A. WORK ELEMENT 11 DATA FILES AND VARIABLES	A-1
APPENDIX B. RELOCATION ANALYSIS QUESTIONNAIRE: HOUSING	B-1
APPENDIX C. RELOCATION ANALYSIS QUESTIONNAIRE: BUSINESSES	C-1
APPENDIX D. KEY INFORMANTS INTERVIEWED	D-1
APPENDIX E. DEVELOPMENT PROJECTS ON BART SURPLUS LAND	E-1

FIGURES		<u>Page</u>
Figure 1.	Major BART System Corridors	16

TABLES

Table 1.	Variables Used in Studying BART's Consumption of Land and Property (Computer Data Files)	9
Table 2.	Distribution of Land Purchases for BART Right of Way By Year	12
Table 3.	Types of Acquisition of Land for BART Facilities	13
Table 4.	Principal Land Use of Parcels Acquired	14
Table 5.	Land Acquired by BART for Transit Facilities, by Corridor and Land Use	15
Table 6.	Land Acquisition in Low Income and Minority Areas by City	18
Table 7.	Residential Displacement in Low Income and Minority Areas	19
Table 8.	Distance of Move for Households and Businesses Receiving Relocation Payments	21
Table 9.	Major Lease Accounts Held by BART on Surplus Property, May 1977	25
Table 10.	Summary of Development Activity on BART Surplus Land (Sold Parcels Greater than One-Half Acre)	26

SUMMARY

OBJECTIVES

The process of building BART involved land acquisition and displacement of businesses and households and, during the construction phase, impacts on real property and retail sales. The study of BART's consumption of land and property focused mainly on documentation of land acquisition, analysis of the relocation process, and development on surplus properties BART acquired and subsequently sold. The final tally of BART's construction impacts, particularly effects on property values, maintenance, rehabilitation, planned construction, shopping patterns, and retail sales, must await completion of other work elements of the Land Use and Urban Development Project from which these impacts will be gleaned.

METHODOLOGY

The BART Real Estate Department provided detailed information on land acquisition, relocation assistance, and development on surplus properties. To facilitate analysis and documentation, a computerized file was created containing information on (1) parcels acquired by BART and the California Department of Transportation (CALTRANS), (2) BART's relocation assistance, and (3) the 1970 socio-economic characteristics of the census tracts traversed by BART. Interviews with a small sample of displaced businesses and households were conducted to determine their views of the relocation process. Others knowledgeable about BART's real estate activities also were surveyed to learn about acquisition and disposition policies and development on surplus properties.

BART'S CONSUMPTION OF LAND AND PROPERTY

To accommodate the lines, stations, and yards, BART acquired and uses close to 1,010 acres of land. This represents approximately 26 square feet per passenger-mile for the 1977 average daily ridership. Because so much of the system was located within or adjacent to existing freeway and railroad rights of way, displacement of households and businesses was relatively small, and in fact, over 60 percent of the land BART bought formerly was undeveloped or used for transportation purposes (625 acres). Only 271 acres, 27 percent of the total take, was in residential use. The remaining land (114 acres) was in commercial and industrial use.

BART's land purchases began in 1964, and by the end of 1969 more than 95 percent of the 3,750 parcels needed for the system had been acquired. Over half the purchases (1,991 parcels) occurred during a two year period (1965-66). Of the total, 58 percent involved a complete take, land and improvements, while the remainder included various combinations of partial takes and easements. In many cases, when BART had to acquire a lot with a single family home or small apartment building, it was able to sell the structure separately

to someone willing to relocate it, thus minimizing demolitions. By this process alone, nearly 600 buildings were moved; some even were barged to Stockton in the Central Valley.

About twenty percent of BART's total acquisition, 220 acres, was required for parking; the balance was for the stations, yards and right of way. The right of way take itself rarely exceeded 75 feet in width. By contrast, an eight-lane freeway requires at least a 120-foot-wide right of way. (Design capacity comparisons are not offered because they would only be of academic interest and bear no relation to actual conditions.)

RESIDENTIAL AND BUSINESS DISPLACEMENT

A total of 3,000 housing units were removed for construction of BART's station and lines; this displaced 7-8,000 people (0.8 percent of the primary service area population) including those affected by the additional freeway widths necessary to accommodate BART in a widened median. While this displacement may seem large in absolute terms, BART's impacts in comparison with other transportation projects were relatively small, given the extent of the system. For example, the three and one-half mile Grove Shafter Freeway in Oakland displaced 3,000 households and numerous small businesses, all but 100 of which would have been displaced if BART had not been in the median.

While comparable data on the total number of businesses displaced are not readily available from the Real Estate Department's records, the number of parcels classified as commercial or industrial use may be taken as a proxy for the number of establishments. Using this assumption, BART displaced 450-500 businesses.

RELOCATION OF HOUSEHOLDS AND FIRMS

Because BART did not provide relocation assistance until 1966, after half of the parcels already had been acquired, records on the relocation process are incomplete. Overall, 441 residential relocation payments (for the most part, \$50 per bedroom up to \$250) were made to households, assisting a total of 1,281 persons. Moving expenses up to \$3,000 also were paid to 257 businesses.

The BART Real Estate Department always followed the most liberal state and federal relocation guidelines, including the regulations of the 1970 federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. However, BART's relocation program largely was unaffected by the 1970 Act (which significantly increased financial payments) because close to 90 percent of the relocation had been completed under prior regulations.

Based on a sample of the 441 households receiving relocation payments, a majority, 55 percent, were able to find housing within the same community, and another 19 percent remained within the same neighborhood. Displaced businesses had a similar experience if the interviews with representatives of 14 firms selected

from the relocation files are any indication. Among those surveyed, three-quarters said that they were able to relocate locally. This experience may not be indicative of all relocatees because payments were available when land was being acquired in some corridors but not available during the acquisition phase in other corridors.

SURPLUS PROPERTIES

As with any transportation project BART had to purchase a certain amount of land that was not actually needed for its right of way, but the quantity was small. In fact, only 8 percent of the total acquired subsequently was classified as surplus (86 acres). Until the spring of 1977, the Real Estate Department had a policy of retaining surplus properties in designated "impact areas," located mainly around stations but also in downtown Oakland, where a significant appreciation in value was expected. On March 24, 1977 the Board of Directors decided to dispose of all remaining surplus lands because the District was not in the real estate business.

To date, 526 parcels comprising 46.2 acres have been sold, leaving 40 acres of surplus land. A survey of development on parcels over one-half acre in size indicated that about one-third of the land now is in residential use, and 88 housing units have been built on or are proposed for BART surplus land. These include three apartment buildings on Grove Street in Oakland and eight single family residences (four planned but not built) along the Concord line. Other developments on BART surplus lands include a University of Pacific dental clinic in Union City, a K-Mart in Hayward, tennis courts in Lafayette and Oakland, a school building near the Rockridge station, and a municipal corporation yard in Walnut Creek.

On the Hearst strip in Berkeley, where BART was constructed in subway, the City is proposing to build a senior citizens' facility on two blocks of surplus land purchased from BART in 1977 and is evaluating development alternatives on two other blocks that have been leased from BART. The Peralta College District purchased another three blocks on the Hearst strip (4½ acres at a cost of \$400,000) for an innovative Community Learning Pavilion, but has postponed construction because of community opposition. North of the Hearst strip, BART is negotiating sale of a small parcel to the City of Berkeley for park use.

In downtown Oakland BART has leased most of its surplus land for interim uses such as parking (305 spaces) pending specific development proposals. Most leases have a five-year term with renewal options, except for the Silver Dragon restaurant which obtained a 55-year tenancy. (Total lease income from all surplus properties was just under \$100,000 in 1977.)

Of particular interest in Oakland is a four block redevelopment proposal between Broadway and Webster, 9th and 11th Streets which is in the final stages of negotiation. It is called Hong Kong/U.S.A. and will be built in part on BART surplus land (35 percent of the total acreage) within walking distance of the 12th Street station. Current proposals call for approximately one million square feet of commercial space, 200,000 square feet of office space, a 450-room

hotel, cultural center, 150 residential units, and 2,000 parking spaces, to be built in seven phases.

CONCLUSIONS AND IMPLICATIONS

Overall, BART's consumption of land and property, its "take" for the line, stations, and yards has not been extremely disruptive. Only a thousand or so acres were acquired, most of which were undeveloped or already used for transportation purposes. Of the 3,000 households and 450-500 businesses displaced, most of those receiving assistance from BART (441 households and 257 businesses) appear to have relocated within their community.

BART has sought to develop its surplus properties by obtaining rental income from short-term leases, negotiating inter-agency transfers and sales to adjacent property owners, and by offering prime parcels at periodic public auctions. BART generally has been successful at implementing its policies for disposal of surplus properties. The only major problems occurred in Berkeley, where community opposition has blocked a number of development proposals. Ultimately, though, the responsibility for planning to optimize re-use of surplus properties rests with local governments, not BART. A transit district can participate in joint corridor planning efforts, but it can not, under current California law, become an active developer. The question of transit agency participation in development to recapture values created or to stimulate transit use was not a part of this study.

Whether alternative BART alignments would have displaced greater or fewer numbers of businesses or households or offered greater development opportunities on surplus land was not addressed, nor were detailed comparisons made with the No-BART Alternative defined by the Metropolitan Transportation Commission. The sole objective of this work element was to document BART's consumption of land and property. How these effects relate to other direct and indirect impacts will be examined in the Project's study of development patterns and the program-wide case studies.

The findings of this study of BART's consumption of land and property suggest the following policy implications.

First, to minimize displacement, local agencies should opt for subway alignments with tunnel construction and shared rights of way — rail transit within a freeway median or a railroad corridor — because these will require the least amount of land and, in most instances, will displace the smallest number of households and businesses. Although cost and environmental considerations may favor other alignments, the benefits of a minimum displacement alternative warrant careful analysis.

Second, the BART experience has demonstrated that much of the housing stock within a proposed right of way can be saved by selling the buildings to buyers

willing to move them to other sites. In similar circumstances, a housing preservation policy certainly should be considered by those responsible for formulating and implementing rail transit right of way acquisition programs.

Third, because development on most surplus lands will occur unless precluded by access or site constraints, joint development planning should be given high priority in rail transit projects. Pending commitment to a specific development proposal, such lands could be leased for interim uses such as parking for carpoolers, transit-riders, or feeder buses.

1. INTRODUCTION

To build the 71-mile, 34-station BART system, a substantial amount of land and property had to be acquired. The purposes of the study of BART's consumption of land and property, Work Element 11 of the Land Use and Urban Development Project, are threefold: (1) to document the land acquisition in terms of the characteristics of businesses and households displaced; (2) to analyze the relocation process; and (3) to examine development on land (and air rights) BART acquired and subsequently sold. A clearer understanding of the impacts of BART's construction process should assist decision-makers planning similar rail rapid transit systems in other metropolitan areas.

Impacts on real property and retail sales during the construction phase are addressed in Work Element 12 and, consequently, not reported here.¹ Thus, the final tally of BART's construction impacts, particularly effects on property values, maintenance, rehabilitation, planned construction, shopping patterns, and retail sales, must await completion of the final report in which the findings and policy implications of all work elements will be addressed.

This working paper's next chapter delineates the research questions and research methodology that have guided the analyses. The three following chapters present the findings regarding properties devoted to BART facilities, displaced households and businesses, and surplus properties. The final chapter presents overall conclusions together with implications for future public actions.

1. John Blayney Associates/David M. Dornbusch & Co., Inc., Study of BART's Construction Impacts (Berkeley: BART Impact Program, Land Use and Urban Development Project Working Paper, April 1977).

2. RESEARCH QUESTIONS AND STUDY DESIGN

OBJECTIVES

Based on prior expectations about BART's impacts, four hypotheses about BART's consumption of land and property were formulated to structure data collection and analysis for this work element:

1. BART displaced more households and businesses located in low income and minority neighborhoods than in other types of neighborhoods.
2. Households and businesses displaced by BART were able to relocate within their neighborhood or local community.
3. Minority households displaced by BART were more dissatisfied by the relocation process than white households displaced.
4. Surplus land and air rights originally acquired by BART, and later sold, have made significant contributions to improvement of business and residential environment in the vicinity.

METHODOLOGY

To test the four research hypotheses, two principal methods were employed: analysis of quantitative and qualitative data on BART's property and relocation impacts, and key informant interviews with displaced households, displaced businesses, BART Real Estate Department personnel, and others knowledgeable about BART's property acquisition process.

Data Collection

Information on BART's property acquisition, relocation, and the disposition of surplus land mostly was obtained from the Real Estate Department's records and large scale right of way maps. However, for BART line segments located within freeway rights of way, notably the Grove Shafter Freeway in Oakland and the Route 24 Freeway in central Contra Costa County, the California Department of Transportation (CALTRANS) District 4 had responsibility for property acquisition under the terms of the shared right of way agreement with BART. Consequently, information on the displacement attributable to BART was obtained from the CALTRANS District 4 office.

BART's share of the total freeway displacement was calculated on the assumption that 80 feet of the freeway median reserved for BART would not have been needed in the absence of BART. In the case of the Route 24 Freeway two widening designs were prepared, one with BART and one without, thereby making it quite simple to identify the additional land and property acquired to accommodate BART. For the Grove Shafter Freeway widening project, however, detailed designs showing a right of way take with and without BART

were not available. In this case, it was assumed that any parcel extending less than 40 feet into the right of way would not have been acquired under a "no-BART alternative." All told, only 40 acres, representing 4.4 percent of the total amount of land acquired for BART, were classified as BART's share of a freeway widening. So even if the 40-foot rule overstated BART's take by 25 or 50 percent, the net effect on the overall assessment would be insignificant.

Three data files were created for analysis purposes: a property file, a 1970 census file, and a relocation file. These are described in the following paragraphs. Table 1 lists the information in each file, while Appendix A provides more detail on the individual variables.

Property File — Each parcel record includes 16 variables describing the size of the parcel, its location by census tract and jurisdiction, original land use, the degree of acquisition, purchase price, purchase date, selling date and price of any surplus land, and any relocation assistance. While BART purchased a total of 3,750 parcels, the property file contains only 3,476 records including data on 329 CALTRANS parcels because some parcels (notably those acquired from the railroads) were aggregated, and other parcels (mainly sign easements in downtown San Francisco and Oakland) involved no transfer of physical property and thus no land use impact.

1970 Census File — To facilitate socio-economic analysis of the areas in which BART property was acquired, all census tracts containing BART parcels were identified and the boundaries indicated on the right of way maps. For each of the 92 tracts in this file, 12 items from the 1970 Census of Population and Housing were punched on a computer card. These include the population of the tract, percent minority residents, median age, and median income.

Relocation File — A final file was constructed from information available on 441 displaced households and 257 businesses receiving relocation assistance from BART, sampling on the basis of every other business and every third household. As with the property file, the relocation file was organized on the basis of individual parcels. The file shows whether a household or business was displaced from a given parcel, and also indicates whether the new location on record at BART was within the same neighborhood, the same city, the same county in the nine county Bay Area, or elsewhere.

Statistical Analysis

Two types of analyses were conducted. First, descriptive statistics on BART's consumption of land and property by corridor and jurisdiction were compiled for use in the program-wide case studies (Work Element 16) and the study of development patterns (Work Element 7). Second, variations in the data were analyzed in terms of the research hypotheses, focusing mainly on differences in type and amount of property acquired in minority areas and non-minority

TABLE 1. VARIABLES USED IN STUDYING BART'S CONSUMPTION OF LAND AND PROPERTY
(Computer Data Files)

<u>Property File</u>	<u>Census File</u>	<u>Relocation File</u>
Parcel Number	Tract Number	Type (Household
City	Population	or Business)
Census Tract	Percent Black	Parcel Number
Land Use	Percent Spanish	New Address Known
Degree of Acquisition	Median Education	Length of Move
Owner vs Renter Occupancy	Tenure	
Retained Footage	Median Income	
Surplus Footage	Percent Lacking	
Purchase Date	Plumbing	
Purchase Price	Percent Over-	
Surplus Selling Date	Crowded	
Surplus Selling Price	Age of Structure	
Residential Units	City	
Residential Relocation Payments		
Business Relocation Payments		
Unsold Surplus Footage		

Source: John Blayne Associates. For details see Appendix A.

areas. For analysis purposes the Implications for the Transportation Disadvantaged Project's definition of minority areas was used — census tracts with over 40 percent of the 1970 resident population classified as black or Spanish heritage.

Interviews with Displaced Households and Businesses

To determine how satisfied relocated households and businesses were with BART's relocation process, a questionnaire (see Appendix B) was prepared for use in a telephone survey of those receiving relocation assistance (441 displaced households and 257 displaced businesses). A 10 percent sample was drawn from the relocation files, first on the basis of a new address having been recorded to facilitate tracing and then on a geographic basis to obtain a representative group in San Francisco, Oakland, Berkeley, and Richmond — case study areas with large minority populations.

Completed interviews were obtained from 15 of the 20 businesses in the initial sample. Five firms could not be located either because they had gone out of business or moved out of the Bay Area; no firms refused to be interviewed. For the household sample, multiple moves and disconnected telephones limited the number of completed interview to 6 out of an initial list of 35 names. Tracing techniques included checking the Polk and Haines directories as well as current telephone directories for San Francisco, Oakland and Richmond.

Because of the small sample and low completion rates for the household survey, the findings reported in this paper should be considered suggestive but not representative of the experience of those relocated by BART.

Key Informant Interviews

Individuals knowledgeable about BART's acquisition program, the relocation process, and the disposition of surplus land were interviewed to obtain background information, complementing the data analysis and survey findings. The names of key informants interviewed for this work element are listed in Appendix C.

LIMITATIONS

Several constraints encountered during the study of BART's consumption of land and property should be noted.

First, records were not kept on displaced households and businesses until BART began making relocation assistance payments in 1966. An estimated one out of seven displaced households and one out of two businesses received such payments. Work Element 11 findings with regard to displacement thus are based on a sample that is non-random and that is geographically distributed according to BART's post-1965 construction and property acquisition timetables. Moreover, even for those households and businesses for which records had been kept, attempts at tracing the relocatees for interviews often proved futile.

Second, socio-economic profiles of households displaced by BART were made on the basis of census data. Since one portion of a census tract can differ dramatically from another portion, no guarantee exists that households displaced from the BART right of way in a given census tract can be represented by the tract's aggregate data. The relationship is especially tenuous for displaced businesses; e.g., one cannot determine whether minorities were affected by displacement of a business. The business may have been a nuisance or may have been a substantial contributor to the neighborhood economy. Enumeration district data could have been analysed, but the effort did not appear worthwhile because displacement affects a larger area and it would have been necessary to define the neighborhood in each case.

Finally, property acquisition files did not always meet Work Element 11 data needs. For example, CALTRANS purchased parcels required for BART along the Grove Shafter Freeway; the exact number of residential units on these parcels was not recorded at time of purchase, so total dwellings acquired in the Concord Corridor were estimated on the basis of structure type. Single family houses were assumed to contain one dwelling unit and one household; duplexes and multi-family structures were treated as duplexes, containing two units and two households. Inspection of pre-BART aerial photography showed no large multi-family housing acquired by CALTRANS and attributable to BART.

3. PROPERTY ACQUIRED FOR BART FACILITIES

OVERVIEW

BART's intensive acquisition program began in 1964, and by the end of 1969 more than 95 percent of the parcels had been bought. As of September 30, 1977, BART had acquired 3,750 parcels, and CALTRANS, acting for BART, had purchased 345 parcels in connection with freeway widening projects designed to accomodate BART in the median. Over half the purchases (1991 parcels) occurred during a two year period (1965-66).² The distribution of land purchases by year is summarized in Table 2.

TABLE 2. DISTRIBUTION OF LAND PURCHASES FOR BART RIGHT OF WAY BY YEAR

	<u>Number of Parcels</u>	<u>Percent of Total Parcels Acquired</u>
1964 or earlier	341	11.1
1965	1,221	38.5
1966	790	25.0
1967	456	14.4
1968 or later	348	11.0
(Missing data)	(316)	
		100.0

Source: BART Real Estate Department, CALTRANS District 4.

Of the total, 62 percent involved a complete take, land and improvement, while the remainder included various combinations of partial takes and easements (see Table 3). The average parcel size was slightly more than one quarter acre. In many cases, when BART had to acquire a lot with a single family home or small apartment building, it was able to sell the structure separately to someone willing to relocate it, thus minimizing demolitions. By this process alone, nearly 600 buildings were moved; some even were barged to Stockton in the Central Valley.

2. Because some parcels were aggregated, notably the railroad parcels, and others pertaining mostly to sign easements were excluded from the property data file, the parcel totals shown in the tables are somewhat less than the total numbers of transactions compiled by BART and CALTRANS (3,482 v. 4095), but this difference does not affect the accuracy of the information on property acquisition and displacement.

TABLE 3. TYPES OF ACQUISITION OF LAND FOR BART FACILITIES

<u>Developed Land</u>	<u>Number of Parcels</u>	<u>Percent of Total Parcels Acquired</u>
Whole parcel acquired, including structures	2,046	62.5
Partial acquisition, including structures	206	6.3
Partial acquisition, land only	202	6.2
Easement with demolition of structures	20	0.6
<u>Vacant Land</u>		
Whole parcel acquired	206	6.3
Partial acquisition	592	<u>18.1</u>
(Missing data)	(2)	100.0

Source: BART Real Estate Department, CALTRANS District 4.

Over 2,000 structures were completely demolished during BART's construction, while another 230 were partially demolished. A few structures, purchased but left untouched during BART's construction, eventually were sold in place as surplus property. Only a third of the parcels acquired by BART were reported as owner-occupied, but data on tenure were missing for 545 parcels, representing 16 percent of the total.

In terms of land area, BART purchased and uses close to 1,010 acres to accommodate the lines, stations, and yards. Because so much of the system was located within or adjacent to existing freeway and railroad rights of way, displacement of businesses and households was relatively small, and in fact, over 60 percent of the land BART bought formerly was undeveloped or used for transportation purposes (625 acres). Only 271 acres, 27 percent of the total take, was in residential use. The remaining land (114 acres) was in commercial and industrial use.

Table 4 summarizes the principal land use of the parcels acquired.

TABLE 4. PRINCIPAL LAND USE OF PARCELS ACQUIRED

	Number of Parcels	Percent of Total Parcels Acquired
Open Space	707	21.6
Single Family Residence	1,475	45.0
Multi-Family Residence	465	14.2
Commercial	221	6.7
Industrial	116	3.5
Mixed	129	3.9
Other	154	4.7
Railroad	9	0.3
(Missing data)	(206)	
		100.0

Source: BART Real Estate Department, District 4.

Table 5 shows the acquisition in acres by corridor and land use; Figure 1 shows the BART corridors. (See pages 15-16.)

About 20 percent of BART's acquisition, 220 acres, was required for parking; the balance was for stations, yards and right of way, or in the case of 86 acres was found to be surplus. To date, approximately 50 acres of surplus property have been sold. (This subject will be treated in greater detail in Chapter 5.)

In terms of actual ridership, BART is an efficient transportation system, consuming only 26 square feet of land per passenger-mile with an average daily patronage of 135,000. If patronage reached 200,000 daily trips and average trip lengths did not change markedly, then BART's land consumption would be 18 square feet per passenger-mile.

RESIDENTIAL AND BUSINESS DISPLACEMENT

A total of 3,000 housing units were removed for construction of BART's lines and stations, displacing 7-8,000 people (0.8 percent of the primary service area population). This includes those affected by the additional freeway widths necessary to accommodate BART in a widened median. While this displacement may seem large in absolute terms, BART's impacts were relatively small in comparison with other transportation projects, given the extent of the system. For example, the three and one-half mile Grove Shafter Freeway in Oakland displaced 3,000 households and numerous small businesses, all but 100 of which would have been displaced if BART had not been in the median.

While comparable data on the number of businesses displaced are not readily available from BART's Real Estate Department's records, the number of parcels

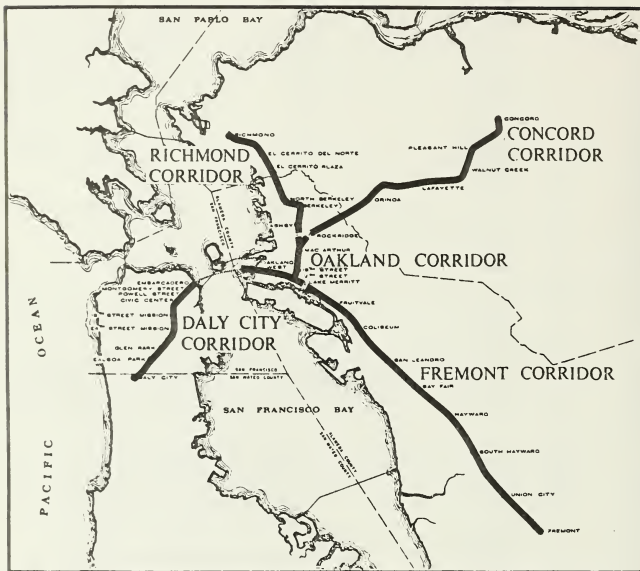
TABLE 5. LAND ACQUIRED BY BART FOR TRANSIT FACILITIES, BY CORRIDOR AND LAND USE^a

Land Use	Concord Acres	Corridor Percent	Richmond Acres	Corridor Percent	Fremont Acres	Corridor Percent	Daly City Acres	Corridor Percent	Oakland Acres	Corridor Percent	Corridor Total Acres	Corridor Total Percent
Open Space	221.2	48	14.3	11	187.8	54	1.8	5	3.7	9	428.8	43
Single Family Residence	132.1	29	35.7	29	27.2	8	14.8	42	6.7	16	216.5	21
Multi-Family Residence	12.6	3	19.9	16	7.8	2	1.2	4	12.6	31	54.1	5
Commercial	9.2	2	13.6	11	20.6	6	1.6	4	5.1	12	50.1	5
Industrial	5.3	1	6.7	5	23.5	7	-	-	6.4	15	41.9	4
Mixed	1.7	-	7.3	6	11.0	3	0.7	2	1.7	4	22.4	2
Other	25.7	6	2.4	2	17.6	5	15.1	43	5.3	13	66.1	7
Railroad	50.6	11	24.9	20	54.3	15	-	-	-	-	129.8	13
Total	458.4	100	124.8	100	349.8	100	35.2	100	41.5	100	1009.7	100

a. Excludes "surplus" land, totalling 85.9 acres, but includes land acquired by CALTRANS to accommodate BART in a widened freeway median.

Source: BART Real Estate Department, CALTRANS District 4

FIGURE 1. MAJOR BART SYSTEM CORRIDORS



SOURCE: JOHN BLAYNEY ASSOCIATES, PEAT MARWICK MITCHELL & CO.

classified as commercial or industrial use may be taken as a proxy for the number of establishments. Using this assumption BART displaced 450-500 businesses.

HYPOTHESIS 1. BART displaced more businesses and households located in low income and minority neighborhoods than in other types of neighborhoods.

The objective of testing this hypothesis was to determine whether land acquisition and displacement in minority and low income areas was any greater than in other areas, in either absolute or proportional terms. Were disadvantaged and minority neighborhoods any more adversely affected by BART's consumption than other areas, or were BART's construction impacts distributed uniformly among socio-economic groups?

For purposes of this analysis, low income areas were defined as census tracts in which the 1969 median annual family income was below \$7,000, and minority areas as tracts with a black or Spanish surname resident population exceeding 40 percent of the total population in 1970.

Relatively little land used for BART facilities was acquired in low income and minority areas. Proportionally, only 15.2 percent of the total is located in low income tracts, and 8.3 percent in minority areas. Table 6 shows the breakdown of land purchases in these areas by city. If undeveloped land acquired in the suburban communities is excluded from the comparison, then the proportion of land in low income and minority areas used for BART facilities increases to 21.1 percent and 11.5 percent respectively — still a small share of the total.

Considering only residential and business displacement, the impact in low income and minority areas was small in absolute terms, but greater than the land acquisition percentages indicated above, mainly because these areas, located for the most part in older urban areas, were more intensively developed than non-minority and middle and upper income areas where BART also bought property. Overall, 37 percent of the residential units and 27 percent of the commercial and industrial acreage purchased to accommodate BART facilities were located in low income areas — 1.8 and 1.3 times the proportion of developed acreage purchased in these tracts. For the minority tracts, the differences are reversed: 15 percent of the residential units and 23 percent of the commercial and industrial acreage were located in the minority areas — 1.3 and 2.0 times the developed acreage proportions for these tracts. Table 7 summarizes the displacement of residential units in low income and minority areas by city in comparison with the total number of residential units in the census tracts traversed by BART.

When a weighted index for each tract was computed — residential units acquired by BART divided by total units — and then correlated with the socio-economic variables, income but not minority composition showed a statistically significant relationship at the 95 percent confidence level. The correlation coefficient for the residential displacement index and median income was $-.238$, indicating that higher income tracts had a disproportionately low share of their

TABLE 6. LAND ACQUISITION IN LOW INCOME AND MINORITY AREAS BY CITY

	Land Acquired For BART (Acres)	Percent in Low Income Tracts ^a	Percent in Minority Tracts ^b
Berkeley	23.6	88.2	38.8
Hayward	109.1	7.4	7.2
Oakland	113.7	71.9	35.1
Richmond	63.3	65.5	10.5
San Francisco	21.8	7.3	5.2
Union City	31.3	-	13.6
Other	646.9	-	-
Total	1009.7		
Average		15.2	8.3

a. 1969 median annual family income below \$7,000.

b. Black or Spanish surname population exceeding 40 percent of total resident population in 1970.

Source: John Blayney Associates, BART Real Estate Department, CALTRANS District 4.

TABLE 7. RESIDENTIAL DISPLACEMENT IN LOW INCOME AND MINORITY AREAS

	Minority Census Tracts ^a				Low Income Census Tracts		
	Black Population		Spanish Population				
	Over 40 Percent of Total		Over 40 Percent of Total				
	Total Housing Units, 1970	Displaced By BART	Total Housing Units, 1970	Displaced By BART	Total Housing Units, 1970	Displaced By BART	Units Displaced By BART
Berkeley	3,963	121	-	-	9,484	-	472
Hayward	-	-	1403	30	1,438	-	-
Oakland	11,399	138	1187	150	22,664	43	43
Richmond	3,708	25	-	-	2,954	93	93
Union City	-	-	1144	16	-	-	-
TOTAL	19,070	284	3734	196	36,540	608	608
Displacement in Low Income or Minority Tracts as a Percent of Total Units Displaced by BART							
		9.5%				6.5%	20%
Displacement in Low Income or Minority Tracts as a Percent of Total Housing in Such Tracts							
		1.5%				5.0%	1.6%

a. Defined on the basis of minority representation in total population in 1970.

Source: John Blayney Associates, BART Real Estate Department, CALTRANS District 4
1970 U.S. Census

residential units acquired by BART. By contrast, the correlation coefficient for residential displacement and percent minority was $-.041$, a relatively weak and statistically insignificant relationship. The strength of this type of analysis is that actual income levels and minority concentrations are used, rather than cutoff points, thus increasing the explanatory power of the statistical test.

Comparable analyses of business displacement were not conducted because valid points of comparison with local business activity at the tract level -- commercial and industrial space or number of employees -- were not available. Thus the relative effect of BART's displacement on local markets and employment of low income and minority workers could not be calculated.

To sum up, BART's displacement was disproportionately greater in low income tracts than other tracts, but minority tracts proportionally were not affected any differently than non-minority tracts. In absolute terms, BART did not displace more businesses and households in low income and minority neighborhoods than in other neighborhoods, and the amount of land and property acquired in such areas was a small share of the total.

RELOCATION OF HOUSEHOLDS AND FIRMS

Because BART did not provide relocation assistance until 1966 after half the parcels already had been acquired, records on the relocation process are incomplete. Overall, 441 residential relocation payments (for the most part, \$50 per bedroom up to \$250) were made to households, assisting a total of 1,281 persons. Moving expenses up to \$3,000 also were paid to 257 businesses. The average relocation payment was \$165 for households and \$1,890 for firms; total relocation payments were \$557,700.

BART's relocation assistance program evolved as follows: In 1965, both the California Division of Highways and the California Department of Water Resources were authorized to make relocation payments. Households could receive \$50 per room up to a maximum of \$250, while businesses could receive up to \$3,000 based on bids from moving companies. In 1966 BART sought State legislation allowing the same compensation for BART relocatees, and this was approved on July 20, 1966.

In August 1966, BART received its first federal capital grant.³ The grant required an adequate relocation program (subject to federal review) for all households and businesses displaced through the acquisition of rights of way and the construction of transit facilities with federal capital grant monies. A portion of the grant could be used for relocation.

Relocation payments thus were derived from both local and federal sources. BART's Real Estate Department made an effort to follow the most liberal state

3. U.S. Department of Transportation, Urban Mass Transportation Administration, Grant CAL-UTG-9.

and federal relocation standards, including guidelines in the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646). However, BART's relocation program was largely unaffected by the 1970 Act because all but 10 percent of relocation assistance payments were made earlier. The 1970 Act grants households up to \$300 in moving expenses and up to \$200 in dislocation allowances, with numerous other provisions for special payments if adequate replacement housing is not readily available. Businesses are granted a payment equal to their average annual net earnings, if the businesses can demonstrate (1) that they cannot be relocated without substantial loss of patronage, and (2) their businesses are not part of a chain with at least one other store. Qualified businesses received at least \$2,500 but no more than \$10,000. As with households, supplemental payments are available in unusual circumstances.

Since most relocation assistance payments were made in the late 1960s, the geographic distribution was tied directly to the phasing of BART construction and the corresponding property acquisition timetable of the BART Real Estate Department. Households residing in Hayward received almost one-fourth of BART's relocation assistance payments, and households in Berkeley, Concord, and Oakland divided another 50 percent. Oakland businesses received 41 percent of the non-residential relocation assistance payments, followed by Hayward businesses with 15 percent, and Richmond and San Francisco businesses, each with approximately 10 percent.

HYPOTHESIS 2. Households and businesses displaced by BART were able to find housing within their neighborhood or local community.

Based on a sample of households and businesses receiving relocation payments, a majority were able to relocate within the same city, and another 13-20 percent remained within the same neighborhood (see Table 8).

TABLE 8. DISTANCE OF MOVE FOR HOUSEHOLDS AND BUSINESSES RECEIVING RELOCATION PAYMENTS

<u>Location of New Address</u>	<u>Percent of Households</u>	<u>Percent of Businesses</u>
Same Neighborhood	19.4	13.0
Same City	54.5	63.8
Same County	14.2	13.0
Bay Area	9.0	8.7
Outside Bay Area	<u>3.0</u>	<u>1.4</u>
Total	100.0	100.0
Sample Size	134	69

Source: John Blayney Associates

When the above results are disaggregated by BART corridor to determine whether households displaced along one BART line exhibited different relocation patterns from households displaced along another line, few differences emerge. Households displaced along the Daly City corridor were likely to move far from their original address, but the sample size is too small to support firm conclusions. The same can be said of Concord corridor households, none of which relocated within the same neighborhood. For displaced businesses, the sample size was too small to allow comparisons of moving patterns in each corridor.

Reactions and Attitudes of Relocated Businesses and Households — Telephone interviews with representatives of 14 businesses now located in Oakland (9), Richmond (2), Hayward (2), and San Leandro (1) that had received relocation assistance from BART provide some indication of the reaction to BART's relocation practices and the problems encountered in moving. Three-quarters of those interviewed looked for a new location within the same community; two-thirds of these firms said that they had difficulty finding a new place of business. Most eventually relocated in the East Bay, and one-third bought or built new buildings mainly because of the problems encountered in securing adequate space. Only one firm had moved since being relocated. Two-thirds were paying higher rent or spent more for a building than they received from BART. Some respondents indicated a cost of two to three times the amount of payment by BART. Yet, in spite of the expressions of dissatisfaction with the adequacy of relocation payments, only one-half of the respondents viewed BART's relocation assistance negatively when asked directly about their overall satisfaction.

Turning to the impact of moving on employees, none of those interviewed said that employees quit because of the move. A number of firms interviewed employed minorities, but none of these stated that BART affected their workforce in any way.

Because only 6 of the 35 potential householder interviewees could be reached by telephone, few definitive findings can be offered about the attitudes of individuals receiving relocation assistance from BART. The number of those experiencing difficulty in finding adequate housing was about equal to those who had no trouble. The majority of the respondents stated that BART's payments were adequate to cover whatever costs they incurred, and most thought their new location was an improvement.

To sum up, analysis of a sample of businesses and households receiving relocation assistance from BART revealed no evidence that those displaced by BART were unable to find new quarters within the same neighborhood or community. In fact, most of those included in this sample were able to find commercial or industrial space or housing within 2 to 5 miles of their old location; few had to move to another county or elsewhere in the Bay Area. Thus, at least for this group and the sample population subject to relocation assistance (441 households and 257 businesses), Hypothesis 2 is confirmed.

HYPOTHESIS 3. Minority households displaced by BART were more dissatisfied by the relocation process than were white households displaced.

Hypothesis 3 can be tested only through an additional interview survey because only 6 of 35 potential telephone interviews were completed with displaced households. Three of the interviewees were minorities satisfied with BART's relocation process, one was a minority dissatisfied with the process, one was a non-minority who was satisfied, and one (whose minority status was not identified) was very dissatisfied with BART's relocation process.

Additional insights were expected from review of newspaper clippings reporting complaints by dissatisfied relocatees, and from litigation brought against BART, but a search proved futile. BART occasionally was the target of complaints over amounts paid for property or for damages to adjacent property, but no legal protests were initiated solely on the basis of dissatisfaction with BART's relocation process. Complaints were not identifiably minority related, nor were they typically initiated by households.

In summary, there is no doubt that BART's relocation process caused dissatisfaction, but available data are too limited to draw conclusions on the extent to which households and businesses were dissatisfied. The data on household reactions is sparse, particularly for minority households. If BART were acquiring land today, much louder complaints would be likely, but in the mid-60s large-scale freeway right of way acquisition was commonplace, Environmental Impact Reports were not required, and individuals whose homes were acquired for the most part accepted any economic loss quietly.

4. SURPLUS PROPERTIES

BART'S REAL ESTATE POLICIES

BART's enabling legislation prohibited acquisition of excess land, and as a general rule only parcels within 40 feet of the center line of BART's proposed trackage were acquired. Consequently, only 86 acres (8 percent of the total amount of land purchased by BART) eventually were termed surplus.

The BART Real Estate Department's formal policy statement guiding the disposition of surplus properties states that parcels capable of independent development are to be sold at public auctions or through sealed bids. Parcels not capable of independent development are defined as having a size or shape below the standard for privately owned parcels in the immediate neighborhood, or not having an acceptable building site under local zoning, or being landlocked. Such parcels may be sold to adjoining owners without soliciting competitive bids. Public agencies are given an opportunity to buy parcels before public auction. Fair market value is sought in disposition of all parcels, whether to adjoining owners, public agencies, or through public auction.⁴

From 1969 until 1977 the BART Real Estate Department adhered to a policy of retaining surplus parcels for which significant appreciation was expected. For example, all parcels within BART "impact areas" (notably in the vicinities of BART stations) were withheld from public auction. On March 24, 1977, the BART Board of Directors decided that all surplus parcels should be disposed of as soon as possible, but availability of staff time will be the constraint (Resolution 2544). The Department once had over 100 staff members but now has only nine. Departmental priorities understandably focus on the completion of all property acquisition programs (purchasing any additional parcels needed, resolving inverse condemnation court challenges, instituting right of way agreements, and arranging inter-governmental transfers), rather than on land disposition. However, the Department does try to keep at least one person working full time on surplus land sales.

DISPOSITION OF SURPLUS LAND

According to the BART Real Estate Department's records, approximately 50 acres spread among 526 parcels (about two-thirds of all surplus parcels) had been sold to date as of September 30, 1977. Sales of 15 parcels are scheduled for the first half of 1978. In an average year 20 to 25 parcels are sold, half through public auction and half through direct sales to adjacent owners or public agencies. Of the parcels remaining to be sold, the Real Estate Department estimates that approximately one-third will be sold through public auction, one-third will be sold to adjoining property owners, one-sixth will be sold to

4. The BART Real Estate Policy Statement initially adopted November 21, 1963 (Res. 305) was revised in 1968, 1969, 1972, and 1977 by Resolutions 1369, 1929, and 2544.

TABLE 9. MAJOR LEASE ACCOUNTS HELD BY BART ON SURPLUS PROPERTY, MAY 1977

Parcel Number	Parcel Location	Current Use	Termination Date	Renewal Options	Monthly Rent	Monthly Rent Per Sq. Foot Parcel Area
K032	9th St. & Webster, Oakland	Restaurant	9/30/2027	None	\$400	\$.07
K012	Grand Av. Near Telegraph, Oakland	U.S. Postal Service Parking	3/31/81	3 5-Year Options	\$1,500	.04
K005	5th St., & Clay, Oakland	Commercial Parking	*	*	\$445	.02
K047	9th St. & Franklin, Oakland	Commercial Parking	*	*	\$400	.02
C222	Chabot Road, Oakland	Tennis Club	5/31/84	2 10-Year Options	\$230	.01
K103	8th St. Near Broadway, Oakland	Branch Bank	10/31/78	2 2-Year Options	\$500	.10
A687	Sutro St., Hayward	Warehouse	3/31/78	None	\$240	.11
AC65	Peralta Blvd, Fremont	Single Family Residence	*	*	\$100	.15
B206	7th St. & Chester, Oakland	Community Garden	10/15/77	None	(\$1/Year)	-
R037/ R050	Hearst From Grove to McGee, Berkeley	City Park	11/16/86	None	(\$1/Year)	-
* Month to Month Rental						

Source: BART Real Estate Department

public agencies, and the remaining one-sixth will be held for eventual BART use. The average surplus parcel, sold separately or with a group of surplus parcels, is just under one-fifth acre in size and sells for \$5,500.

Unsold, Income Producing Parcels — In recent years BART has received income from 1,290 rental accounts, less than 30 of which remain active. Table 9 presents information on the major accounts, e.g., a 55-year lease at \$400 a month to the Silver Dragon Restaurant in downtown Oakland. Leases are a source of income, totalling just under \$100,000 per year. Parcels that are producing income need not be sold quickly, so the Real Estate Department can watch for optimal market conditions and select among development proposals.

Of note in Oakland is the parking (304 spaces) provided on land leased from BART. While this only represents 1.2 percent of the total amount of parking provided in downtown Oakland according to the 1976 Oakland Parking Management Plan inventory, such interim uses still encourage continued reliance on the automobile to the detriment of increased BART patronage. Persons parking their car on a surplus BART parcel may be foregoing the option of riding BART to the same destination. Although the actual numbers are small, a policy conflict still exists.

Sold Parcels — The majority of surplus parcels sold by BART to date have been small and ill-suited for intensive development. To gauge the extent of development on surplus properties, the current uses of all sold parcels or groups of parcels totalling at least 25,000 square feet were determined. Appendix D provides detailed information on 110 transactions. Table 9 summarizes significant changes occurring on sold surplus parcels. The most important cases are discussed in connection with Hypothesis 4.

TABLE 10. SUMMARY OF DEVELOPMENT ACTIVITY ON BART SURPLUS LAND (Sold Parcels Greater Than One-Half Acre)

<u>Existing/Proposed Use</u>	<u>Sites</u>	<u>Structures</u>	<u>Acres</u>	<u>Percent of Total</u>
Public Open Space	5	—	9.1	22.1
Single Family Residence	8	15	13.2	32.1
Multi-Family Residence	1	3*	0.7	1.7
Government Facility	5	3	11.2	27.3
Adjacent Owner/Unknown	7	—	6.9 41.1	16.8 100.0

*Total of 88 Residential Units

Source: John Blayney Associates, BART Real Estate Department

HYPOTHESIS 4. Surplus land and air rights originally acquired by BART, then sold, have made significant contributions to improvement of business and residential environment in the vicinity.

The Work Element 11 property file was screened for all sold surplus parcels greater than 25,000 square feet (approximately one-half acre). BART Real Estate Department records also were examined to identify collective parcel sales of greater than 25,000 square feet. The individual parcels and groups of parcels were located on BART right of way maps. Parcel land use was determined from 1977 aerial photographs and key informant interviews. Noteworthy instances of development in surplus land are discussed below.

The 8 block "Hearst strip" along Hearst Avenue between Sacramento and Milvia in Berkeley has been the site of controversy for many years, as is well documented by news clippings.⁵ This land was acquired for a cut and cover subway and has been available for re-use since 1970.

In April 1977 the City of Berkeley acquired two blocks between Milvia and Grove Streets for the construction of a senior citizens' services center. The transaction included the conveyance of air rights over the North Berkeley BART Station. (BART was the original owner of the air rights, transferred those rights to the City of Berkeley, and then received the air rights back during the Hearst strip transaction.) The senior citizens' facility is now under construction with the benefit of federal funds.

The two blocks between Grove and McGee Streets are being leased from BART by the City of Berkeley for ten years at the rate of \$1 per year. The area includes "People's Park II," a recreation area 'appropriated' by local citizens. The ten year lease allows Berkeley time to prepare a development plan for the area, a plan which tentatively will call for open space preservation and recreational uses.

Potentially, the largest project would occupy three blocks (4½ acres) between McGee and Sacramento Streets purchased by the Peralta College District for \$400,000 in July 1976. Peralta College had intended to construct an innovative Community Learning Pavillion on the site, but the proposal was opposed by the City of Berkeley. Normally the City of Berkeley would not be able to prevent construction of the pavillion because state law allows a school district to over-ride local zoning. However, Berkeley initiated State legislation that would preclude an override of local zoning with respect to real property acquired and resold by BART and in September 1977, the Bates Bill (AB 1308) became law. The City of Berkeley now has zoning and permit powers over any development proposed by Peralta College on the former BART surplus land. Peralta College and the City of Berkeley are negotiating the future use of the property as of the writing of this report.

5. See, for example, articles published in the Berkeley Gazette in 1970 on the following dates: July 14, July 23, October 7, October 9, December 3, and December 9.

Following is a partial list of major projects on surplus land that has been sold.

- Three new apartment buildings containing 88 units on Grove Street between 58th and 61st Streets in Oakland.
- A K-Mart in South Hayward (part of which is on surplus BART land).
- A University of the Pacific dental clinic in Union City.
- A City of Walnut Creek Public Works maintenance yard on five acres.
- A 2-plus acre flood control area in Pleasant Hill.
- A 1-3/4 acre site purchased by a Lafayette resident intending to build a house with two tennis courts.

Several parcels have been sold with original structures, including a warehouse near the Ashby BART station in Berkeley and another warehouse (sold for \$100,000) in Walnut Creek.

The 592 residential structures acquired by BART, resold and moved, brought BART \$1.4 million. The homes were relocated throughout the Bay Area and, in the case of 150 homes purchased by an entrepreneur, as far away as Stockton.

The development proposal with potential for becoming the most impressive project occurring on BART surplus property would be located in the Chinatown Redevelopment Project in downtown Oakland. "Hong Kong/U.S.A.," to be built on four blocks bounded by Broadway, 9th Street, Webster Street, and 11th Street, would include 1,800,000 square feet of floor area -- commercial and office space and high rise apartments (150 units) -- to be built in seven phases. Three blocks would have six-story buildings and subterranean parking (2,050 spaces), while the fourth block would have a 450-room hotel tower. A cultural center is proposed to reinforce the Oriental theme. Hong Kong/U.S.A. would be a \$114 million private investment, requiring \$25 million in public expenditures mainly for parking and improvements. Approximately 35 percent of the project site currently is owned by BART.

To summarize: Without testing Hypothesis 4 on the basis of rigorous evaluation criteria applied to each of the many surplus parcels sold by BART, overall conclusions on the validity of Hypothesis 4 still can be drawn. The uses made of surplus land to date -- and particularly the expected uses, such as Hong Kong/U.S.A. -- generally are beneficial to surrounding neighborhoods.

5. CONCLUSIONS AND IMPLICATIONS

Overall, BART's consumption of land and property, its "take" for the line, stations and yards, has not been extremely disruptive. Only a thousand or so acres were acquired, most of which was undeveloped or already used for transportation purposes. Of the 3,000 households and 450-500 businesses displaced, most of those receiving assistance from BART (441 households and 257 businesses) appear to have relocated within their community. Problems encountered due to inadequate relocation assistance mainly were due to the more restrictive state and federal standards applicable in the 1960s. BART's relocation program largely was unaffected by the 1970 federal Uniform Relocation Assistance and Real Property Acquisition Act which increased the compensation available to those displaced by public projects. The findings reported in this paper should be interpreted with this caveat in mind.

BART has sought to develop its surplus properties by obtaining rental income from short-term leases, negotiating inter-agency transfers and sales to adjacent owners, and offering prime parcels at public auctions. In the main BART has been quite successful at implementing its policies for disposal of surplus properties. The only major problems occurred in Berkeley where community opposition has blocked a number of development proposals. Ultimately, though, the responsibility for planning to optimize re-use of surplus properties rests with local governments, not BART. A transit district can participate in joint corridor planning efforts, but it cannot, under current California law, become an active developer. The question of transit agency participation in development to recapture values created or to stimulate transit use was not a part of this study.

Whether alternative BART alignments would have displaced greater or fewer numbers of businesses or households or offered greater development opportunities on surplus land was not addressed. In comparison with the No-BART Alternative (NBA) defined by MTC as the 1971 highway and transit system with minor improvements in bus service, BART clearly had a greater adverse impact because of the displacement of firms and households. In the NBA no such displacement would have occurred. However, looking only at BART's construction impacts without considering the advantages of improved transportation service or the distributional effects — who benefits and who pays — presents a one-sided picture. The final tally must await completion of other work elements of the Land Use and Urban Development Project and will be presented in the final report. The relationship between these impacts and other direct and indirect effects of BART will be addressed in the study of development patterns (Work Element 7) and the program-wide case studies (Work Element 16).

The findings of this study of BART's consumption of land and property suggest the following policy implications.

First, to minimize displacement, local agencies should opt for subway alignments with tunnel construction and shared rights of way — rail transit within a freeway median or a railroad corridor — because these will require the least amount

of land and, in most instances, will displace the smallest number of households and businesses. Although cost and environmental considerations may favor other alignments, the benefits of a minimum displacement alternative warrant careful analysis.

Second, the BART experience has demonstrated that much of the housing stock within a proposed right of way can be saved by selling the buildings to buyers willing to move them to other sites. In similar circumstances, a housing preservation policy certainly should be considered by those responsible for formulating and implementing rail transit right of way acquisition programs.

Third, because development on most surplus lands will occur unless precluded by access or site constraints, joint development planning should be given high priority in rail transit projects. Pending commitment to a specific development proposal, such lands could be leased for interim uses such as parking for car-poolers, transit-riders, or feeder buses.

PARTICIPATING FIRMS

JOHN BLAYNEY ASSOCIATES, URBAN AND REGIONAL PLANNERS

John Blayney, Associate Technical Director
Michael V. Dyett, Project Manager
Robert W. Glover
Michael H. Fajans
Gilbert H. Castle, III
Margaret Gurdziel
Catharine M. Way
Denise M. Riederer
Karen Hull

DAVID M. DORNBUSCH & COMPANY, INC.

David M. Dornbusch, Technical Director
Caj Falcke
James Merchant

HUMAN RESOURCES CORPORATION

Masato Inaba
Lloyd Gallardo
Robert Pitts
Louise Stutsman

APPENDIX A. WORK ELEMENT 11 DATA FILES AND VARIABLES

The following information was coded and keypunched on computer cards for analysis of BART's consumption of land and property. These data files will be available at MTC following completion of the project.

Property File (3,482 records)

1. BART or CALTRANS parcel identification number
2. City in which parcel is located
3. Census tract in which parcel is located
4. Principal land use at time of acquisition, coded as follows:
 - 0 - Vacant, open space, recreation, agriculture, take without demolition
 - 1 - Single family detached residential
 - 2 - Other residential (duplex, triplex, rest home, etc.)
 - 3 - Commercial
 - 4 - Industrial
 - 5 - Mixed commercial/residential/industrial/institutional
 - 6 - Other (institutional, public, utility, parking, local road)
 - 7 - Railroad
5. Degree of demolition of structures on parcel, coded as follows:
 - 1 - Total take of structure
 - 2 - Partial take of structure
 - 3 - No take of structure
 - 4 - Easement requiring demolition
 - 5 - Total take of land
 - 6 - Partial take of land
6. Owner or renter occupied, coded as follows:
 - 1 - Owner occupied residence (in single family or multi-family dwelling)
 - 0 - All other cases (renter occupied only, no residents, etc.)
7. Amount of land acquired and retained for BART facilities, in 1000s ft²
8. Amount of land acquired then later sold as surplus, in 1000s ft²
9. Parcel purchase date, coded as follows:
 - 1 - 1971
 - 2 - 1972 or later
 - 3 - 1962 or earlierAll others - last digit of year of purchase (e.g., 5 = 1965)

10. Parcel purchase price, in \$1000s
11. Selling date of any surplus, coded the same as the purchase date
12. Selling price of any surplus, in \$1000s
13. Number of residential units on the parcel at time of purchase, coded as follows:
 - 90 - 2 or more residential units in a CALTRANS parcel, all taken
 - 98 - 1 unit in a CALTRANS parcel, partially taken
 - 99 - 2 or more units in a CALTRANS parcel, partially taken
 - All others - actual number of units taken in a BART parcel
14. Household relocation assistance, coded as follows:
 - 0 - No household relocation assistance payments made to parcel occupants
 - 1 - Relocation assistance payments made to one or more households
15. Business relocation assistance, coded as follows:
 - 0 - No business relocation assistance payments made to parcel occupants
 - 1 - Relocation assistance payments made to one or more businesses
16. Unsold surplus, in 1000s ft²

1970 Census File (92 records)

1. Census tract identification number
2. Population of the census tract, in 1000s
3. Percent of residents that are Black
4. Percent of residents that are Spanish
5. Median school years completed
6. Percent of residents with same domicile in 1965 and 1970
7. Median income of families and unrelated individuals
8. Percent of residential units lacking some or all plumbing
9. Percent of residential units with 1.51+ persons per room
10. Percent of residential units that are owner occupied
11. Percent of residential units built before 1939
12. City in which the census tract is located

Relocation File (266 records)

1. Type of relocatee, coded as follows:
 - 0 - Business
 - 1 - Household
2. Parcel identification number
3. Record of new address, coded as follows:
 - 0 - New address of relocatee not known
 - 1 - New address of relocatee known
4. Geographic degree of move, coded as follows:
 - 1 - Relocation within same neighborhood (less than 1 mile)
 - 2 - Relocation within the same community
 - 3 - Relocation within the same county
 - 4 - Relocation within the Bay Area
 - 5 - Relocation outside the Bay Area
 - 9 - Unknown

APPENDIX B.

RELOCATION ANALYSIS QUESTIONNAIRE: HOUSEHOLDS

Person interviewed: _____ Parcel No.: _____

Hello, my name is _____ and I am working on a study for a public agency (Metropolitan Transportation Commission) about BART's impacts on land use and urban development. If you have a moment, I would like to ask you a few questions about your relocation experience. (If this is not a good time or the right person, arrange to call back, if possible.) Anything that you say will not be attributed to you in any published reports.

1. How easy was it for you to find another place to live after being displaced by BART? _____ Where did you look? _____
After BART made you move, did you buy or rent? _____ Did you have to pay much more for housing? _____ (PROBE — \$25, \$50, \$100 a month more? Circle amount if stated) _____
2. Have you moved since? _____ (If yes) Was BART at all a factor? _____
(If yes) Why? _____
3. Do you recall whether the money you received for relocation expenses was adequate? _____ (If not adequate) How much more out-of-pocket costs did you have to pay? _____
4. How much time did you have to look for a place to live? _____
(PROBE for number of weeks or months)
5. In general, were you satisfied or dissatisfied with BART's relocation assistance?

6. Overall, do you think you moved to a better neighborhood after being displaced by BART? _____
7. Do you recall any relocation problems your neighbors might have had with BART?

8. About how many people lived with you at the time you had to move because of BART? _____
9. Are you a member of a minority group? _____ Which one? _____
10. What do you do for a living? _____
11. What year were you born? _____

Thank you very much. We appreciate your assistance in our study.

Interviewer: _____

Date: _____

APPENDIX C.

RELOCATION ANALYSIS QUESTIONNAIRE: BUSINESSES

Parcel No.: _____

Person interviewed: _____ Firm: _____

Hello, my name is _____ and I am working on a study for a public agency (Metropolitan Transportation Commission) about BART's impacts on land use and urban development. If you have a moment, I would like to ask you a few questions about your relocation experience. (If this is not a good time or the right person, arrange to call back, if possible.) Anything that you say will not be attributed to you in any published reports.

1. How easy was it for you to find a new location for your business? _____
_____. Where did you look? _____
2. Have you had to move since your first relocation? _____ (If yes,) why?

3. Do you recall whether you had to pay significantly more rent or spend more to buy a building than you received from BART? _____
4. Was your business helped or hurt by the move? _____
5. Do you recall whether the money you received for moving expenses was adequate? _____ (If not adequate) How much more out-of-pocket costs did you have to pay? _____
6. In general, were you satisfied or dissatisfied by BART's relocation assistance?

7. About how many people worked for you at the time you had to move? _____
How many work for you now? _____
8. When you relocated, did some employees quit because they did not want to work at the new location? _____
9. What proportion of them were minorities? _____

Thank you very much. We appreciate your assistance in our study.

Interviewer: _____

Date: _____

APPENDIX D. KEY INFORMANTS INTERVIEWED

<u>Name</u>	<u>Title</u>	<u>Organization</u>
Martin del Campo	Partner	Del Campo-Forscutt-Noyola
William Evans	Business Director	Management Services Corporation
Elwood Hanson	Chairman of the Board	Bayview Federal Savings (Mission District)
Michael Kaplan	Architect	Oakland Architectural Department
Norman Lind	Planning Director	Oakland Planning Department
Ed McKeegan	Former Councilman and Mayor of Richmond	
Robert B. Moffatt	Senior Real Estate Officer	Bay Area Rapid Transit District
Charles E. Newman	Manager of Real Estate	Bay Area Rapid Transit District
Dene Ogden	Appraiser	Private Practice
Thomas Peak	Planning Director	Berkeley Planning Department
Ben Ramos	President	Mission Economic Development Association
Leandro P. Soto	Executive Director	OBECA/Arriba Juntos

APPENDIX E. DEVELOPMENT PROJECTS ON BART SURPLUS LAND

As of November 1, 1977, development activities on BART surplus parcels or groups of parcels 25,000 square feet or more in size include the following:

Parcels:	A956-A985, AB79-AB81
Location:	Hayward, between Jefferson and Tennyson Streets, just to the north of the South Hayward BART Station, along the east side of the BART tracks
Size:	Approximately 97,000 square feet
Purchaser:	City of Hayward
Date:	January 1973
Price:	\$100
Land Use:	Currently vacant; linear public park proposed
Parcels:	AB53-AB59
Location:	Union City, Between I and J Streets, two-thirds mile north of the Union City BART Station, along the west side of the tracks
Size:	Approximately 27,000 square feet
Purchaser:	University of the Pacific
Date:	January 1973
Land Use:	University of the Pacific Dental Clinic
Parcel:	C053
Location:	Pleasant Hill, immediately south of Bancroft Road, three-fourths mile northeast of the Pleasant Hill BART Station, along the north-west side of the BART tracks
Size:	Approximately 95,000 square feet
Purchaser:	Contra Costa County Flood Control and Water Conservation District
Date:	November 1969
Price:	\$29,403
Land Use:	Currently vacant
Parcel:	AC60
Location:	Fremont, near Horner and Acacia Streets, three-fourths mile northwest of the Fremont BART Station, along the southeast side of the BART tracks
Size:	Approximately 50,000 square feet
Purchaser:	Adjacent owner
Date:	May 1973
Price:	\$7,000
Land Use:	Private residence swimming pool

Parcels: C139-C142, C144, C158, C070.53, C070.54
Location: Walnut Creek, south of Walden Road, halfway between the Walnut Creek and Pleasant Hill BART stations, along the west side of the BART tracks
Size: Approximately 205,000 square feet
Purchaser: City of Walnut Creek
Date: October 1968
Price: \$75,000
Land Use: Municipal public works maintenance facility

Parcel: C066
Location: Walnut Creek, along Las Junitas Way, one-half mile north of the Pleasant Hill BART Station
Size: Approximately 29,000 square feet
Purchaser: B. Smith
Date: May 1967
Price: \$8,260
Land Use: Single family residence (in existence prior to BART)

Parcel: C067
Location: Contra Costa County, near Lee Lane, between the Concord and Pleasant Hill BART stations
Size: Approximately 43,000 square feet
Purchaser: F. J. Goni
Date: March 1966
Price: \$26,126
Land Use: Single family residence (in existence prior to BART)

Parcels: C113, C116, C118, C120, C121
Location: Pleasant Hill, near Oak Drive and Treat Boulevard, just to the south of the Pleasant Hill BART Station
Size: Approximately 36,000 square feet
Purchaser: Adjacent owner
Date: November 1972
Price: \$35,000
Land Use: Two new single family dwellings

Parcels: A840-A852
Location: Hayward, along Groom Street, two-thirds mile southeast of the Hayward BART Station, along the northeast side of the BART tracks
Size: Approximately 44,000 square feet
Purchaser: L.S.W. Co.
Date: September 1972
Price: \$134,500
Land Use: Several single family residences (in existence prior to BART)

Parcels: C196-C198, C230, C241
Location: Oakland, near Golden Gate Avenue and Chabot Road, one mile east of the Rockridge BART Station, along the north side of the BART tracks
Size: Approximately 32,000 square feet
Purchaser: Jeanne Athearn
Date: June 1973
Price: \$38,100
Land Use: Single family residence (in existence prior to BART)

Parcels: C199, C231-C234
Locations: Oakland, near Golden Gate Avenue and Chabot Road, one mile east of the Rockridge BART Station along the north side of the BART tracks
Size: Approximately 35,000 square feet
Purchaser: Alameda County Superintendent of Schools
Date: August 1976
Price: \$15,000
Land Use: Educational facility

Parcels: K163-K168
Location: Oakland, between 4th and 5th Avenues along E. 7th Street, one-half mile south of the Lake Merrit BART Station
Size: Approximately 33,000 square feet
Purchaser: Oakland Redevelopment Agency
Date: October 1968
Price: \$44,570
Land Use: Part of Laney College

Parcels: R855-R862, RB01-RB05
Location: Richmond, immediately adjacent to the Richmond BART Station parking lot, along the east side of the BART tracks.
Size: Approximately 117,000 square feet
Purchaser: City of Richmond
Date: April 1971
Price: No monetary transaction -- "Richmond Parking Lot Agreement"
Land Use: City park

Parcels: R653-R671
Location: Oakland, between 58th and 61st Streets along Grove Street, two-thirds mile south of the Ashby BART Station
Size: Approximately 31,000 square feet
Purchaser: John W. Perry
Date: October 1971
Price: \$50,000
Land Use: Three newly constructed apartment buildings containing 88 units

Parcels: R341 + 38 additional parcels
 Location: Berkeley, between Sacramento Street and McGee Avenue along Hearst Avenue, immediately to the east of the North Berkeley BART Station
 Size: Approximately 186,000 square feet
 Purchaser: Peralta College
 Date: July 1976
 Price: \$400,000
 Land Use: Community Learning Pavilion proposed

Parcels: C351, C353, C355-358
 Location: Concord, between Marilyn Way and Cowell Road along Galindo Street, one-half mile south of the Concord BART Station, along the east side of the BART tracks
 Size: Approximately 33,000 square feet
 Purchaser: Morrell Realty
 Date: March 1976
 Price: \$37,000
 Land Use: Currently vacant

Parcels: C027, C616
 Location: Contra Costa County, halfway between the Concord and Pleasant Hill BART stations, to the north of the BART tracks
 Size: Approximately 34,000 square feet
 Purchaser: H. S. Reins
 Date: April 1971
 Price: \$12,500
 Land Use: Residential area, but current use unknown

Parcels: R812, R813
 Location: El Cerrito, between San Pablo Avenue and Interstate 80, one-half mile north of the El Cerrito del Norte BART Station
 Size: Approximately 89,000 square feet
 Purchaser: Adachi Nursery (adjacent owner)
 Date: June 1974 and April 1976 (parcels sold separately)
 Price: \$161,500
 Land Use: Currently vacant, except for some plant storage

Parcels: K112-K124
 Location: Oakland, bounded by Madison, Oak, 7th and 9th Streets, next to the Lake Merritt BART Station
 Size: Approximately 60,000 square feet
 Purchaser: Exchange with the City of Oakland for the block containing the BART Station
 Date: March 1970
 Price: No monetary transaction
 Land Use: Relocated city park

